

HIV
Prevention

SAVES LIVES

Condoms and Their Use in Preventing HIV Infection and Other STDs

With nearly 1 million Americans infected with HIV, most of them through sexual transmission, and an estimated 15 million cases of other sexually transmitted diseases (STDs) occurring each year in the United States, effective strategies for preventing these diseases are critical. Refraining from having sexual intercourse with an infected partner is the best way to prevent transmission of HIV and other STDs. But for those who have sexual intercourse, latex condoms are highly effective when used consistently and correctly.

Condoms are effective in preventing HIV and other STDs

The correct and consistent use of latex condoms during sexual intercourse—vaginal, anal, or oral—can greatly reduce a person's risk of acquiring or transmitting most STDs, including HIV infection, gonorrhea, chlamydia, trichomonas, human papilloma virus infection (HPV), and hepatitis B. Protecting yourself and others against STDs is important because many of these diseases have serious complications. Protecting yourself and others against HIV is important because it is life threatening and has no cure.

Laboratory studies show that latex condoms are effective barriers to HIV and other STDs. In addition, several studies provide compelling evidence that latex condoms are highly effective in protecting against HIV infection when used for every act of intercourse. This protection is most evident from studies of couples in which one member is infected with HIV and the other is not, i.e., “discordant couples.” In a 2-year study of discordant couples in Europe, among 124 couples who reported consistent use of latex condoms, none of the uninfected partners became infected. In contrast, among the 121 couples who used condoms inconsistently, 12 (10%) of the uninfected partners became infected. In another study, among a group of 134 discordant couples who did not use condoms at all or did not use them consistently, 16 partners (12%) became infected. This contrasts markedly with infections occurring in only 3 partners (2%) of the 171 couples in this study who reported



Latex condom

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consistently using condoms over the 2-year period. Similarly, in a recent study among discordant couples in Haiti, 1 of 42 uninfected partners (2%) became infected with consistent condom use and 19 of 135 who used condoms inconsistently (14%) became infected.

Condoms are classified as medical devices and are regulated by the Food and Drug Administration (FDA). Every latex condom manufactured in the United States is tested for defects before it is packaged. During the manufacturing process, condoms are double-dipped in latex and tested electronically for holes.

Several studies clearly show that condom breakage rates in this country are less than 2%. Most of the breakage and slippage likely is due to incorrect use rather than poor condom quality. Using oil-based lubricants can weaken latex, causing the condom to break. In addition, condoms can be weakened by exposure to heat or sunlight or by age, or they can be torn by teeth or fingernails. Studies also indicate that condoms slip off the penis in about 1-5% of acts of vaginal intercourse and slip down (but not off) about 3-13% of the time.

Some persons have expressed concern about studies that report higher failure rates among couples using condoms for pregnancy prevention. Analysis of these studies indicates that the large range of efficacy rates is related to incorrect or inconsistent use. In fact, latex condoms are highly effective for pregnancy prevention, but only when they are used properly. Research indicates that only 30-60% of men who claim to use condoms for contraception actually use them for every act of intercourse. Further, even people who use condoms every time may not use them correctly from start to finish. Incorrect use contributes to the possibility that the condom could leak at the base or break.

Condoms must be used consistently and correctly to provide maximum protection

As mentioned previously, the primary reason that condoms sometimes fail to prevent HIV/STD infection or pregnancy is incorrect or inconsistent use, not failure of the condom itself. Consistent use means using a condom with each act of intercourse. Correct condom use includes all of the following steps:

- ▼ Use a new condom for each act of vaginal, anal, or oral intercourse.
- ▼ Use the condom throughout sex—from start to finish.
- ▼ Put on the condom as soon as erection occurs and before any vaginal, anal, or oral contact with the penis. Hold the tip of the condom and unroll it onto the erect penis, leaving space at the tip of the condom, yet ensuring that no air is trapped in the condom's tip.
- ▼ Adequate lubrication is important to prevent condom breakage, but use only water-based lubricants, such as glycerine or lubricating jellies (which can be purchased at any pharmacy). Do not use oil-based lubricants such as petroleum jelly, cold cream, hand lotion, or baby oil, which can weaken the condom.
- ▼ Withdraw from the partner immediately after ejaculation, holding the condom firmly to the base of the penis to keep it from slipping off.

If stored properly, condoms are good for 5 years after the manufacturing date. Condoms lubricated with spermicide may remain good for only 2 years. Condom users should make sure that the condom expiration date has not passed or the manufacturing date does not indicate the condom is too old.



*Water-based lubricants**

Condom users have product options

There are several types of condoms. Nearly all types offer protection against HIV and other STDs.

Latex condoms for men. Latex condoms are made of a particular kind of rubber. Laboratory studies show that intact latex condoms provide a highly effective barrier to sperm and micro-organisms, including HIV and the much smaller hepatitis B virus. Their effectiveness has been proven over many years.



Condoms and latex sheet

Synthetic condoms. For people who are allergic to latex, several new types of materials are being used to make condoms. One new type is polyurethane, a soft plastic. Another new type is Tactylon™*, a synthetic latex. Lab tests have shown that both these materials provide an effective barrier against sperm, bacteria, and viruses such as HIV.

Polyurethane condoms for women. The female condom (Reality™*) fits inside the vagina and covers some of the area outside of the vagina. It also is made of polyurethane. When a male condom cannot be used, couples should consider using a female condom.

Unlike latex condoms, synthetic condoms such as male and female polyurethane condoms can be used with either water-based or oil-based lubricants.

Although not as thoroughly tested as latex condoms, synthetic condoms likely provide similar protection.

Lambskin condoms. These condoms are made from animal membranes that contain tiny holes. While they can prevent pregnancy, they should **not** be used for STD or HIV prevention because viruses may be able to pass through these holes.

Novelty condoms. Novelty (play) condoms are for sexual amusement only. The FDA does not allow them to be labeled as condoms, and they should never be used for STD/HIV or pregnancy prevention.

Spermicides. Although studies indicate that nonoxynol-9, a spermicide, kills HIV in laboratory testing, it is not clear whether spermicides used alone or with condoms during intercourse provide protection against HIV. Therefore, latex condoms with or without spermicides should be used to prevent sexual transmission of HIV.

Oral protection. Even though their risk is less than with unprotected anal and vaginal sex, people who engage in oral sex can reduce their risk of getting HIV or another STD by placing a barrier over the vagina or anus. In addition to the male condom, a product designed to reduce the risk of acquiring an STD during oral sex is now being sold in the United States. The Sheer Glyde Dam™* is a 10" x 6" latex sheet that the FDA has authorized for marketing in the United States. Plastic food wrap, dental dams (pieces of latex used by dentists), and condoms that have been cut open all have been used to cover the vagina or anus during oral sex, although there is no information about how well these materials work.

Education about condom efficacy does not promote sexual activity

Five U.S. studies of specific sex education programs have demonstrated that HIV education and sex education that included condom information either had no effect upon the initiation of intercourse or resulted in delayed onset of intercourse; five studies of specific programs found that HIV/sex education did not increase frequency

* Use of trade names is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services.

of intercourse, and a program that included development of skills to negotiate safer sexual behaviors actually resulted in a decrease in the number of youth who initiated sex. In addition, a World Health Organization (WHO) review cited 19 studies of sex education programs that found no evidence that sex education leads to earlier or increased sexual activity in young people. In fact, five of the studies cited by WHO showed that such programs can lead to a delay or decrease in sexual activity. In a recent study of youth in Los Angeles, an HIV prevention program focusing on condom use did not increase sexual activity or the number of sex partners. But condom use did increase among those who were already sexually active. A 1987 study of young U.S. men who were sent a pamphlet discussing STDs with an offer of free condoms also did not find any increase in the youths' reported sexual activity.

Prevention is cost-effective

In summary, STDs, including HIV infection, are preventable, and condoms represent an effective prevention tool. A recent analysis estimated that, for high-risk heterosexual men, the societal savings (in health care costs and productivity) per condom was \$27, and for men who have sex with men, the savings per condom was more than \$530 when condoms were used consistently and correctly with multiple partners.

CDC is committed to providing the scientific community and the public with accurate and objective information about HIV infection and AIDS. It is vital that clear information on HIV infection and AIDS be readily available to help prevent further transmission of the virus and to allay fears and prejudices caused by misinformation. For a complete description of CDC's HIV/AIDS prevention programs, see "Facts about CDC's Role in HIV and AIDS Prevention."

For more information...

CDC National AIDS Hotline:

1-800-342-AIDS (2437)

Spanish: 1-800-344-SIDA (7432) (HIV and STDs)

Deaf: 1-800-243-7889

CDC National Prevention Information Network (NPIN):

P.O. Box 6003

Rockville, Maryland 20849-6003

1-800-458-5231

Internet Resources:

CDC Division of HIV/AIDS Prevention: <http://www.cdc.gov/hiv>

National Center for HIV, STD, and TB Prevention: <http://www.cdc.gov/nchstp/od/nchstp.html>

NPIN: <http://www.cdcnpin.org>